

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference E 2055 PCT	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 00/06087	International filing date (day/month/year) 29/06/2000	(Earliest) Priority Date (day/month/year)
Applicant FIDIA ADVANCED BIOPOLYMERS SRL		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

HYALURONIC ACID DERIVATIVES FOR THE PREVENTION AND TREATMENT OF CUTANEOUS SCARS

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

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International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 7-11
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 7-11

Present claims 1-14 relate to an extremely large number of possible compounds/products, that is to any hyaluronic acid derivative including esters with alcohols, auto-cross-linked esters, cross-linked derivatives, a hemi-ester of succinic acid with hyaluronic acid, o-sulphated and O/N-sulphated derivatives.

Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small number of such compounds/products claimed, namely esters formed from alcohols. In fact, only one example is given which relates to the benzyl ester of hyaluronic acid.

In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compounds/products that are esters of alcohols and hyaluronic acid.

Claims 1 and 3 are unclear because the definition of a "biomaterial" is unclear. Moreover, the distinction between a pharmaceutical composition or a biomaterial is unclear. In the context of said claims, there would appear to be no difference and as such, the expression "or biomaterial" has been disregarded for the purposes of the search.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/06087

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K31/728 A61P43/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, PAJ, CHEM ABS Data, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DAVIDSON, J.M. ET AL.: "Hyaluronate derivatives and their application to wound healing: preliminary observations" CLINICAL MATERIALS, vol. 8, no. 1-2, 1991, pages 171-177, XP000984474 abstract introduction discussion	1-6, 12-14
Y	---	1-6, 12-14
	-/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search

5 March 2001

Date of mailing of the international search report

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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>RUIZ-CARDONA L ET AL: "Application of benzyl hyaluronate membranes as potential wound dressings: evaluation of water vapour and gas permeabilities"</p> <p>BIOMATERIALS,GB,ELSEVIER SCIENCE PUBLISHERS BV., BARKING, vol. 17, no. 16, 1 August 1996 (1996-08-01), pages 1639-1643, XP004032972</p> <p>ISSN: 0142-9612</p> <p>abstract</p> <p>tables 1,2</p> <p>conclusions</p> <p>---</p>	1-6, 12-14
X	<p>WO 99 04828 A (RIVAROSSA ALBERTO ;FIDIA ADVANCED BIOPOLYMERS SRL (IT); PRESSATO D) 4 February 1999 (1999-02-04)</p> <p>abstract</p> <p>example 1</p> <p>---</p>	1-6, 12-14
X	<p>WO 97 07833 A (CALLEGARO LANFRANCO ;FIDIA ADVANCED BIOPOLYMERS SRL (IT); PAVESIO) 6 March 1997 (1997-03-06)</p> <p>abstract</p> <p>page 2, line 1 - line 17</p> <p>examples</p> <p>claims 1-28</p> <p>---</p>	1-6, 12-14
X	<p>US 5 676 964 A (DELLA VALLE FRANCESCO ET AL) 14 October 1997 (1997-10-14)</p> <p>cited in the application</p> <p>column 16, line 27 - line 3</p> <p>example 41</p> <p>---</p>	1-6, 12-14
X	<p>US 4 851 521 A (DELLA VALLE FRANCESCO ET AL) 25 July 1989 (1989-07-25)</p> <p>cited in the application</p> <p>column 48, line 57 - line 60</p> <p>example 24</p> <p>column 43, line 40 - line 44</p> <p>claims 1,5,14</p> <p>-----</p>	1-6, 12-14

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9904828	A	04-02-1999	IT PD970170 A	28-01-1999
			AU 9255598 A	16-02-1999
			EP 0999859 A	17-05-2000
WO 9707833	A	06-03-1997	IT PD950166 A	28-02-1997
			IT PD950167 A	28-02-1997
			AU 718484 B	13-04-2000
			AU 6930096 A	19-03-1997
			BR 9610996 A	13-07-1999
			CA 2230530 A	06-03-1997
			CN 1199343 A	18-11-1998
			CZ 9800595 A	14-10-1998
			EP 0850074 A	01-07-1998
			JP 11511344 T	05-10-1999
			NO 980888 A	27-04-1998
			NZ 316944 A	30-08-1999
			PL 325240 A	06-07-1998
			SI 9620106 A	30-06-1999
			TR 9800353 T	21-05-1998
US 5676964	A	14-10-1997	IT 1219587 B	18-05-1990
			AT 115590 T	15-12-1994
			AT 195534 T	15-09-2000
			AU 631125 B	19-11-1992
			AU 3574789 A	29-11-1989
			CA 1339122 A	29-07-1997
			DE 68919900 D	26-01-1995
			DE 68919900 T	11-05-1995
			DE 68929241 D	21-09-2000
			DK 10990 A	12-03-1990
			WO 8910941 A	16-11-1989
			EP 0341745 A	15-11-1989
			EP 0614914 A	14-09-1994
			ES 2064378 T	01-02-1995
			ES 2151910 T	16-01-2001
			GR 3015035 T	31-05-1995
			HU 53666 A,B	28-11-1990
			IL 90274 A	12-09-1996
			JP 10324701 A	08-12-1998
			JP 2504163 T	29-11-1990
			JP 2941324 B	25-08-1999
			NZ 229100 A	28-08-1995
US 4851521	A	25-07-1989	IT 1203815 B	23-02-1989
			IT 1214658 B	18-01-1990
			AT 135713 T	15-04-1996
			AU 591501 B	07-12-1989
			AU 5983686 A	26-02-1987
			DE 3650501 D	25-04-1996
			DE 3650501 T	21-11-1996
			DK 323686 A	09-01-1987
			EP 0216453 A	01-04-1987
			EP 0696598 A	14-02-1996
			ES 2001512 A	01-06-1988
			FI 862878 A,B,	09-01-1987
			FI 892710 A,B,	02-06-1989
			FI 892711 A	02-06-1989
			FI 94767 B	14-07-1995

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Information on patent family members

International Application No

PCT/EP 00/06087

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4851521 A		HU 42512 A,B	28-07-1987
		IE 81120 B	22-03-2000
		IL 79362 A	31-07-1995
		IN 165582 A	25-11-1989
		JP 2569012 B	08-01-1997
		JP 62064802 A	23-03-1987
		KR 8701901 B	21-10-1987
		NO 175716 B	15-08-1994
		NO 305369 B	18-05-1999
		NZ 216786 A	26-05-1992
		NZ 233045 A	26-05-1992
		PH 25189 A	27-03-1991
		PT 82941 A,B	01-08-1986
		US 4965353 A	23-10-1990
		US 5202431 A	13-04-1993
		US 5336767 A	09-08-1994
		PH 25383 A	03-06-1991
		PH 25382 A	03-06-1991
		PH 25642 A	21-08-1991
		PH 25643 A	21-08-1991
		ZA 8605071 A	30-09-1987